

## REMARKS

The claims are 9 and 10. Reconsideration of the present claims is respectfully requested.

Claims 9 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Redmond 2 and Thorneycroft et al. in view of Schoonen and Boissonneault. Applicants respectfully traverse those rejections for the reasons described below.

Prior to addressing the rejection, applicants believe it is helpful to identify the merits of the invention. The proposed acne-control regimen underwent extensive examination through two double-blind, placebo-controlled studies evaluating its effectiveness in reducing total lesions, inflammatory lesions, and comedones. The invention decreased the presence of all three dramatically—by 48.0, 58.3, and 36.5 percent, respectively, in one study, and 38.1, 41.9, and 34.3 percent in another. This represents the most thorough examination of the effectiveness of any oral contraceptive on acne to date, and the only to focus on patients with moderate-to-severe acne.

The Examiner relies on Redmond 2 as a disclosure of an oral contraceptive containing a progestin with low androgenicity that does not counteract the ethinyl estradiol-mediated rise in sex hormone binding globulin (SHBG) which leads to lower testosterone levels. The examiner concludes that, based on the above, one of ordinary skill in the art would have been motivated to employ the herein claimed regimen of norethindrone acetate and ethinyl estradiol in treating acne. Applicants respectfully disagree with the Examiner's position.

Redmond 2 teaches an oral contraceptive using small, stepped doses of norgestimate (.25 µg or less) and a very high dose of ethinyl estradiol. Redmond 2 further states that ethinyl estradiol increases serum levels of SHBG, which results in decreased free-testosterone levels and, thus, reduced acne. First, Applicants note that a determination of efficacy cannot be determined just on the basis of increasing SHBG and binding testosterone. These factors are not accepted as surrogates for proving efficacy as illustrated by the Food and Drug Administration's requirement for adequate and well-controlled trials to show efficacy.

Moreover, the regimen in Redmond 2 uses a different progestin in doses three orders of magnitude smaller than the claimed invention (See abstract). Redmond 2 also attributes the effectiveness in treating acne to the high doses of ethinyl estradiol (See page 30S,

col. 2, fourth paragraph). Therefore, it is respectfully submitted that one skilled in the art would not have concluded at the time of this invention that an oral contraceptive regimen incorporating far higher doses of a progestin coupled with lower levels of ethinyl estradiol would be effective in treating acne.

The Examiner relies on Thorneycroft as a disclosure of two oral contraceptive regimens, each containing 20 µg of ethinyl estradiol and either 100 µg of levonorgestrel or 1000 µg of norethindrone acetate, that are effective in treating acne. The Examiner further relies on Thorneycroft as a disclosure that norethindrone acetate significantly reduces testosterone levels. Applicants respectfully disagree with the Examiner's position.

Rather than teaching that an oral contraceptive containing norethindrone acetate reduces testosterone levels, Thorneycroft instead finds that an oral contraceptive containing norethindrone acetate does not change the amount of total testosterone at all, while an oral contraceptive containing a different progestin reduces total testosterone by 27% (See page 257, col. 2, paragraph 2). Furthermore, none of the study participants in Thorneycroft had severe acne, while those in studies of the claimed invention did (See page 258, col. 2, paragraph 1). Finally, the Thorneycroft article fails to present any statistically significant data on the reduction of inflammatory lesions or comedones (See page 258, Figure 2). As a result, it is respectfully submitted that one of ordinary skill in the art could not have concluded from Thorneycroft at the time of this invention that the herein claimed oral contraceptive regimen would be effective in treating acne.

The Examiner also relied on Schoonen as teaching that norethindrone has weak androgenicity and thus concluded, in light of Redmond 2, that using an oral contraceptive regimen containing norethindrone acetate to treat acne would be obvious. Applicants strongly disagree with the Examiner's position.

Neither Schoonen nor Redmond 2 suggest any correlation between the androgenicity of norethindrone/norethisterone and that of norethindrone acetate. The argument that a progestin having a weak androgenicity is a requisite for or a guarantee of efficacy for acne treatment is clearly incorrect. In fact, oral contraceptives containing levonorgestrel, a progestin with a known strong androgenicity, have been shown to be effective, e.g. ALESSE. Thus, it is respectfully submitted that Redmond 2 read in light of Schoonen fails to teach that an oral

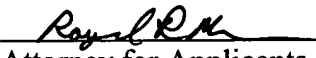
contraceptive containing norethindrone acetate would have been reasonably expected to be effective in treating acne.

In view of the arguments set forth above, and the arguments set forth in the Applicants' February 21, 2003 response, applicants respectfully submit that claims 9 and 10 are clearly patentable over the cited art.

Wherefore, Applicants respectfully submit that the cited art, whether taken alone or together, does not disclose or suggest the presently claimed invention. Accordingly, it is respectfully requested that the claims be allowed and the case passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

  
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